

R E P O R T R E S U M E S

ED 016 368

EF 001 270

ESTIMATED SPACE REQUIREMENTS FOR FT. WAYNE FACILITY TO BE
JOINTLY OCCUPIED BY INDIANA UNIVERSITY AND PURDUE UNIVERSITY.
BY- COLLINS, RALPH L. AND OTHERS
INDIANA UNIV., BLOOMINGTON
PURDUE UNIV., LAFAYETTE, IND.

PUB DATE JUN 60

EDRS PRICE MF-\$0.25 HC-\$1.56 37P.

DESCRIPTORS- *CLASSIFICATION, *COLLEGE PLANNING, *EDUCATIONAL
SPECIFICATIONS, *FACILITY GUIDELINES

THIS REPORT PRESENTS THE RESULTS OF THE JOINT PLANNING COMMITTEE OF INDIANA UNIVERSITY AND PURDUE UNIVERSITY IN TERMS OF THE AMOUNT AND TYPE OF SPACE THAT WILL BE REQUIRED BY 1965 AND BY 1972 IN A FACILITY TO BE JOINTLY OCCUPIED BY THE TWO UNIVERSITIES AT FORT WAYNE. IN GENERAL, A SIX-STEP PROCEDURE WAS FOLLOWED--(1) EACH INSTITUTION, INDEPENDENTLY PROJECTED ITS OWN EDUCATIONAL PROGRAM BASED UPON SUCH ASSUMPTIONS AS WERE CONSISTENT WITH ITS PURPOSES AND ITS METHODS OF OPERATION. (2) THIRTY-SIX DIFFERENT SPACE CATEGORIES WERE ESTABLISHED AND AGREEMENTS WERE REACHED AS TO UNIT SIZE, IN SQUARE FEET, FOR EACH CATEGORY. (3) EACH INSTITUTION THEN TRANSLATED ITS REQUIREMENTS INTO "PART" UNITS. (4) THESE "PART" UNITS FOR THE TWO INSTITUTIONS WERE THEN ADDED FOR EACH SPACE CATEGORY IN ORDER TO ARRIVE AT COMBINED REQUIREMENTS. (5) EACH INSTITUTION DEVELOPED ITS OWN REQUIREMENTS FOR NON-INSTRUCTIONAL SPACE, INCLUDING SUCH ITEMS AS ADMINISTRATIVE SPACE AND INSTRUCTORS' OFFICES. (6) MEMBERS OF THE COMMITTEE DEVELOPED THE REQUIREMENTS FOR JOINT FACILITY SPACE, INCLUDING LIBRARY, AND FOOD FACILITY. THE RESULTS OF THE FINDINGS AND PROJECTIONS ARE SUMMARIZED IN THE TABLES AND APPENDIX. (BH)

**ESTIMATED SPACE REQUIREMENTS
FOR FT. WAYNE FACILITY
TO BE JOINTLY OCCUPIED BY
INDIANA UNIVERSITY AND PURDUE UNIVERSITY**

**THE JOINT PLANNING COMMITTEE
OF
INDIANA UNIVERSITY
AND
PURDUE UNIVERSITY**

June 1960

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE
PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION
POSITION OR POLICY.

ESTIMATED SPACE REQUIREMENTS

FOR FT. WAYNE FACILITY

TO BE JOINTLY OCCUPIED BY

INDIANA UNIVERSITY AND PURDUE UNIVERSITY

Submitted to

President Herman B Wells, Indiana University

President Frederick L. Hilde, Purdue University

by

THE JOINT PLANNING COMMITTEE

Representing Indiana University

Dr. Ralph L. Collins, Vice President and Dean of Faculties
Dr. Smith Higgins, Asst. Dean of University Extension
Dr. Ralph E. Broyles, Director of Ft. Wayne Center

Representing Purdue University

Dr. C. H. Lawshe, Dean of University Extension
Dr. D. A. Scott, Asst. Dean of University Extension
Dr. R. L. Ewigleben, Director of Ft. Wayne Center
(replacing Dr. R. M. Bateman, resigned)

June, 1960

INDIANA UNIVERSITY
BLOOMINGTON

OFFICE OF
VICE-PRESIDENT AND
DEAN OF THE FACULTIES

June 9, 1960

President Frederick L. Hovde, Purdue University
President Herman B Wells, Indiana University

My dear President Hovde and President Wells:

The Joint Planning Committee, appointed by
you to study the space needs of the contemplated
Ft. Wayne Indiana-Purdue Extension Center, respect-
fully presents its report for your consideration.

Ralph L. Collins
Ralph L. Collins, Chairman
Joint Planning Committee

na

Enc.

C O N T E N T S

| | <u>Page</u> |
|---|-------------|
| ESTIMATED SPACE REQUIREMENTS FOR FT. WAYNE FACILITY ----- | 1 |
| Table 1 - Summary of Combined Space Requirements for 1965 and 1972 ----- | 4 |
| | |
| APPENDIX A: COMBINED INSTRUCTIONAL SPACE REQUIREMENTS FOR 1965 ----- | A 1 |
| Table 2 - Combined 1965 Daytime Instructional Space Requirements ----- | A 2 |
| Table 3 - Combined 1965 Evening Instructional Space Requirements ----- | A 4 |
| | |
| APPENDIX B: COMBINED INSTRUCTIONAL SPACE REQUIREMENTS FOR 1972 ----- | A 6 |
| Table 4 - Combined 1972 Daytime Instructional Space Requirements ----- | A 7 |
| Table 5 - Combined 1972 Evening Instructional Space Requirements ----- | A 9 |
| | |
| APPENDIX C: PU BASE ESTIMATES FOR DAYTIME AND EVENING, 1965 and 1972 ----- | A11 |
| Table 6 - PU Daytime and Evening Requirements, 1965--- | A12 |
| Table 7 - PU Daytime and Evening Requirements, 1972--- | A14 |
| | |
| APPENDIX D: IU BASE ESTIMATES FOR DAYTIME AND EVENING, 1965 and 1972 ----- | A16 |
| Table 8 - IU Daytime and Evening Requirements, 1965--- | A17 |
| Table 9 - IU Daytime and Evening Requirements, 1972--- | A19 |
| | |
| APPENDIX E: JOINT FACILITY ESTIMATES BY THE COMMITTEE FOR 1965 and 1972 ----- | A21 |
| Table 10 - Joint Facility Requirements for 1965 and 1972 ----- | A22 |
| | |
| APPENDIX F: SUPPORTING MATERIAL FOR INDIANA UNIVERSITY AND PURDUE UNIVERSITY PROGRAMS ----- | A23 |
| Part 1: Procedures and Assumptions Used by Purdue Representatives in Developing Purdue Program Space Requirements ----- | A24 |
| Table 11 - Freshman and Sophomore Enrollment Projections for Ft. Wayne Center ----- | A26 |
| Part 2: Basic Assumptions in Development of Indiana University Space Needs ----- | A28 |

**ESTIMATED SPACE REQUIREMENTS FOR FT. WAYNE FACILITY
TO BE OCCUPIED JOINTLY BY
INDIANA UNIVERSITY AND PURDUE UNIVERSITY**

During the current academic year the JOINT PLANNING COMMITTEE has addressed itself to the problem of the amount and type of space that will be required by 1965 and by 1972 in the facility to be occupied by the two institutions in Ft. Wayne. In general, a six-step procedure was followed:

1. Each institution, independently, projected its own educational program based upon such assumptions as were consistent with its purposes and its methods of operation. (See Appendix F).
2. Thirty-six different space categories were established by the COMMITTEE, and agreements were reached as to unit size (in square feet) for each category.
3. Each institution then translated its requirements as determined in Step 1, into "part" units as established in Step 2. (See Tables 6 through 9) NOTE: Whole units were used for General Purpose Classrooms.
4. These "part" units for the two institutions were then added for each space category in order to arrive at combined requirements. The process was followed for both day and evening programs. (See Tables 2 through 5)
5. Each institution developed its own requirements for non-instructional institutional space. Included were such items as administrative space and instructors' offices. (See Table 6 through 9, Category C)
6. Members of the COMMITTEE, functioning as a group, developed the requirements for joint facility space, including library, student lounge, and food facility. (See Table 10)

The results of these findings and projections are summarized both for 1965 and 1972 in Table 1.

Space Requirements

Since the day program (8:00-5:00) and evening program (5:00-10:00) requirements are not identical, combined needs for the two periods are presented separately in Table 1 (Columns 2 and 4). Entered in Column 6 is the sum of the maximum day or evening space required for the several specialized facilities. Still referring to Table 1, Row F and F' entries represent a 40% "markup" for non-usable space; this figure is consistent with recent university building experience and includes such items as stairwells and hallways, rest rooms, elevator shafts, heating and air conditioning equipment, and related service space and facilities. As shown in Table 1, the COMMITTEE estimates that the two institutions will jointly require 146,700 square feet in 1965 and 198,400 in 1972.

The COMMITTEE is aware that the Fort Wayne Joint Facility may well involve other space needs not included above, as for example, the need for an auditorium or a physical education facility. This COMMITTEE believes further that if such an auditorium were found to be needed a minimum of 18,000 square feet should be provided. Similarly, the COMMITTEE believes that if a physical education facility is deemed necessary, 25,000 square feet should be provided. There may well be other facilities necessary at the Fort Wayne site but the COMMITTEE has detailed

here the requirements only for the strictly academic needs of the two institutions.

Next Phase of Activity

Many problems of a management nature are related to the joint usage of classrooms and laboratories. Similarly, problems associated with the management of the library, the food facility, and building services need to be considered. The effective functioning of the educational programs of the two institutions will depend, to a large degree, upon the intelligent resolution of any existing differences in advance, and upon the programming and assigning of management responsibilities prior to construction and occupancy. The JOINT PLANNING COMMITTEE believes there is a need (1) to define these problems more specifically, and (2) to propose to the Presidents of the two institutions appropriate methods for arriving at solutions. The COMMITTEE is willing to undertake these assignments if so directed by the Presidents.

TABLE 1

SUMMARY OF COMBINED SPACE REQUIREMENTS FOR 1965 and 1972
(All entries are in square feet except Columns 3, 5, and 7

| MAJOR SPACE CATEGORIES (1) | INSTRUCTIONAL | | | | NON-INSTRUCTIONAL | | | TOTAL (Sum 6, 8, 9 & 10) (11) | |
|-------------------------------------|---------------|----------------|--------------|----------------|-------------------|-----------|---------------|--|--------------|
| | DAY | | EVENING | | IU (8) | PU (9) | JOINT (10) | | |
| | SPACE (2) | No.Rms. (3) | SPACE (4) | No.Rms. (5) | | | | | |
| | | | | | | | | | SPACE (6) |
| 1965 | | | | | | | | | |
| A. Gen. Purpose | 14100 | 19 | 20300 | 29 | 20300 | 29 | | 20300 | |
| B. Specialized | 32600 | 28 | 31200 | 27 | 35200 | 30 | | 35200 | |
| C. Institutional | | | | | | | 5700 | 13700 | |
| D. Joint Space | | | | | | | 8000 | 35600 | |
| E. Sub-Totals | 46700 | 47 | 51500 | 56 | 55500 | 59 | 5700 | 104800 | |
| F. 40% Non-Usable | | | | | | | 8000 | 41900 | |
| G. TOTAL REQUIREMENTS FOR 1965 | ----- | | | | | | | | 146700 |
| 1972 | | | | | | | | | |
| A' Gen. Purpose | 19900 | 26 | 29000 | 39 | 29000 | 39 | | 29000 | |
| B' Specialized | 43600 | 37 | 42800 | 37 | 50000 | 42 | | 50000 | |
| C' Institutional | | | | | | | 6825 | 17100 | |
| D' Joint Space | | | | | | | 10275 | 45600 | |
| E' Sub-Total | 63500 | 63 | 71800 | 76 | 79000 | 81 | 6825 | 141700 | |
| F' 40% Non-Usable | | | | | | | 10275 | 56700 | |
| G' TOTAL REQUIREMENTS FOR 1972 | ----- | | | | | | | | 198400 |

Entries in Columns 6 and 7 are not the maximum entries in Columns 2 and 4 or 3 and 5; instead, they were computed by summing the maximum space or number of rooms required day or evening.

A 1

A P P E N D I X A

COMBINED INSTRUCTIONAL SPACE REQUIREMENTS

FOR 1965

TABLE 2

COMBINED 1965 DAYTIME INSTRUCTIONAL SPACE REQUIREMENTS

| Space Category | Unit Area | IU Part Units | PU Part Units | Combined | | Square Feet |
|-----------------------------------|-----------|---------------|---------------|------------|-------------|-------------|
| | | | | Units Part | Units Whole | |
| A. GENERAL PURPOSE CLASSROOMS | | | | | | |
| 1. Type I | 500 | 4 | 7 | | 11 | 5500 |
| 2. Type II | 800 | 3 | 3 | | 6 | 4800 |
| 3. Type III | 1600 | 1 | | | 1 | 1600 |
| 4. Type IV | 2200 | | 1 | | 1 | 2200 |
| CATEGORY A TOTAL ----- | | | | | | 14,100 |
| B. SPECIAL INSTRUCTIONAL SPACE | | | | | | |
| 5. Gen. Chemistry | 1600 | .5 | 1.9 | 2.4 | 3 | 4800 |
| 6. Chemistry(other) | 1600 | .3 | .3 | .6 | 1 | 1600 |
| 7. Elem. Physics | 1300 | .3 | 1.3 | 1.6 | 2 | 2600 |
| 8. Physics(other) | 1100 | | .4 | .4 | 1 | 1100 |
| 9. Gen. Biology | 1200 | .3 | .7 | 1.0 | 1 | 1200 |
| 10. Biology(other) | 1000 | | .6 | .6 | 1 | 1000 |
| 11. Geology-Geog. | 300 | 1.0 | | 1.0 | 1 | 300 |
| 12. Psychology and Animal Lab. | 1400 | .8 | | .8 | 1 | 1400 |
| 13. Electrical | 1200 | | .8 | .8 | 1 | 1200 |
| 14. Indus. Technology | 1200 | | .1 | .1 | 1 | 1200 |
| 15. Elem. Drafting | 1100 | | 4.1 | 4.1 | 5 | 5500 |
| 16. Adv. Drafting | 1400 | | .3 | .3 | 1 | 1400 |

TABLE 2 (CONTINUED)

| <u>Space Category</u> | <u>Unit Area</u> | <u>IU Part Units</u> | <u>PU Part Units</u> | <u>Combined Units</u> | | <u>Square Feet</u> |
|--|------------------|----------------------|----------------------|-----------------------|--------------|--------------------|
| | | | | <u>Part</u> | <u>Whole</u> | |
| 19. Accounting | 1200 | .4 | | .4 | 1 | 1200 |
| 20. Modern Lang. | 1200 | 1.0 | .4 | 1.4 | 2 | 2400 |
| 21. Music & Theater | 1000 | 1.0 | | 1.0 | 1 | 1000 |
| 22. Art, Design, Crafts and Audio Visual | 1000 | 1.0 | | 1.0 | 1 | 1000 |
| 23. Radio & TV | 1000 | .5 | .5 | 1.0 | 1 | 1000 |
| 24. Speech | 1200 | 1.0 | | 1.0 | 1 | 1200 |
| 25. Computing Lab. | 300 | 1.0 | | 1.0 | 1 | 300 |
| 26. Reading | 1200 | | .4 | .4 | 1 | <u>1200</u> |
| CATEGORY B TOTAL ----- | | | | | | 32,600 |

TABLE 3

COMBINED 1965 EVENING INSTRUCTIONAL SPACE REQUIREMENTS

| Space Category | Unit Area | IU Part Units | PU Part Units | Combined | | Square Feet |
|-----------------------------------|--------------|---------------------|---------------------|----------|-------|----------------|
| | | | | Units | | |
| | | | | Part | Whole | |
| A. GENERAL PURPOSE CLASSROOMS | | | | | | |
| 1. Type I | 500 | 10 | 7 | | 17 | 8500 |
| 2. Type II | 300 | 7 | 3 | | 10 | 8000 |
| 3. Type III | 1600 | 1 | | | 1 | 1600 |
| 4. Type IV | 2200 | | 1 | | 1 | <u>2200</u> |
| CATEGORY A TOTAL ----- | | | | | | 20,300 |
| B. SPECIAL INSTRUCTIONAL SPACE | | | | | | |
| 5. Gen. Chemistry | 1600 | .5 | .6 | 1.1 | 2 | 3200 |
| 6. Chemistry(other) | 1600 | .4 | .2 | .6 | 1 | 1600 |
| 7. Elem. Physics | 1300 | .3 | .5 | .8 | 1 | 1300 |
| 8. Physics(other) | 1100 | | .1 | .1 | 1 | 1100 |
| 9. Gen. Biology | 1200 | .3 | .4 | .7 | 1 | 1200 |
| 10. Biology(other) | 1000 | | .3 | .3 | 1 | 1000 |
| 11. Geology-Geog. | 300 | 1.0 | | 1.0 | 1 | 300 |
| 12. Psychology and Animal Lab. | 1400 | 1.0 | | 1.0 | 1 | 1400 |
| 13. Electrical | 1200 | | 1.0 | 1.0 | 1 | 1200 |
| 14. Indus. Technology | 1200 | | .6 | .6 | 1 | 1200 |
| 15. Elem. Drafting | 1100 | | 4.0 | 4.0 | 4 | 4400 |
| 16. Adv. Drafting | 1400 | | 1.6 | 1.6 | 2 | 2800 |

TABLE 3 (CONTINUED)

| Space Category | Unit Area | IU Part Units | PU Part Units | Combined | | Square Feet |
|---|--------------|---------------------|---------------------|---------------|-------|----------------|
| | | | | Units Part | Whole | |
| 19. Accounting | 1200 | 1.8 | | 1.8 | 2 | 2400 |
| 20. Modern Lang. | 1200 | 1.0 | .6 | 1.6 | 2 | 2400 |
| 21. Music & Theater | 1000 | 1.0 | | 1.0 | 1 | 1000 |
| 22. Art, Design, Crafts and Audio Visual | 1000 | 1.0 | | 1.0 | 1 | 1000 |
| 23. Radio & TV | 1000 | .5 | .5 | 1.0 | 1 | 1000 |
| 24. Speech | 1200 | 1.0 | | 1.0 | 1 | 1200 |
| 25. Computing Lab. | 300 | 1.0 | | 1.0 | 1 | 300 |
| 26. Reading | 1200 | | .5 | .5 | 1 | 1200 |
| CATEGORY B TOTAL ----- | | | | | | 31,200 |

A 6

A P P E N D I X B

COMBINED INSTRUCTIONAL SPACE REQUIREMENTS
FOR 1972

TABLE 4

COMBINED 1972 DAYTIME INSTRUCTIONAL SPACE REQUIREMENTS

| Space Category | Unit Area | IU Part Units | PU Part Units | Combined | | |
|-------------------------------|--------------|---------------------|---------------------|----------|-------|----------------|
| | | | | Units | | Square Feet |
| | | | | Part | Whole | |
| A. GENERAL PURPOSE CLASSROOMS | | | | | | |
| 1. Type I | 500 | 5 | 10 | | 15 | 7500 |
| 2. Type II | 800 | 4 | 4 | | 8 | 6400 |
| 3. Type III | 1600 | 1 | | | 1 | 1600 |
| 4. Type IV | 2200 | | 2 | | 2 | 4400 |
| CATEGORY A TOTAL ----- | | | | | | 19,900 |

B. SPECIAL INSTRUCTIONAL SPACE

| | | | | | | |
|-----------------------------------|------|-----|-----|-----|---|------|
| 5. Gen. Chemistry | 1600 | .7 | 2.7 | 3.4 | 4 | 6400 |
| 6. Chemistry(other) | 1600 | .5 | .6 | 1.1 | 2 | 3200 |
| 7. Elem. Physics | 1300 | .4 | 2.3 | 2.7 | 3 | 3900 |
| 8. Physics(other) | 1100 | | .8 | .8 | 1 | 1100 |
| 9. Gen. Biology | 1200 | .8 | 1.0 | 1.8 | 2 | 2400 |
| 10. Biology(other) | 1000 | | .8 | .8 | 1 | 1000 |
| 11. Geology-Geog. | 300 | 1.0 | | 1.0 | 1 | 300 |
| 12. Psychology and Animal Lab. | 1400 | .9 | | .9 | 1 | 1400 |
| 13. Electrical | 1200 | | 1.0 | 1.0 | 1 | 1200 |
| 14. Indus. Technology | 1200 | .1 | | .1 | 1 | 1200 |
| 15. Elem. Drafting | 1100 | | 5.5 | 5.5 | 6 | 6600 |

TABLE 4 (CONTINUED)

| Space Category | Unit Area | IU Part Units | PU Part Units | Combined | | Square Feet |
|--|-----------|---------------|---------------|------------|-------------|-------------|
| | | | | Units Part | Units Whole | |
| 16. Adv. Drafting | 1400 | | .4 | .4 | 1 | 1400 |
| 17. Cloth. & Textiles | 1000 | | .5 | .5 | 1 | 1000 |
| 18. Food & Nutrition | 1200 | | .4 | .4 | 1 | 1200 |
| 19. Accounting | 1200 | .8 | | .8 | 1 | 1200 |
| 20. Modern Lang. | 1200 | 1.0 | .7 | 1.7 | 2 | 2400 |
| 21. Music & Theater | 1000 | 1.0 | | 1.0 | 1 | 1000 |
| 22. Art, Design, Crafts and Audio-Visual | 1000 | 2.0 | | 2.0 | 2 | 2000 |
| 23. Radio & TV | 1000 | 1.0 | 1.0 | 2.0 | 2 | 2000 |
| 24. Speech | 1200 | 1.0 | | 1.0 | 1 | 1200 |
| 25. Computing Lab. | 300 | 1.0 | | 1.0 | 1 | 300 |
| 26. Reading | 1200 | | 1.0 | 1.0 | 1 | 1200 |
| CATEGORY B TOTAL ----- | | | | | | 43,600 |

TABLE 5

COMBINED 1972 EVENING INSTRUCTIONAL SPACE REQUIREMENTS

| Space Category | Unit Area | IU Part Units | PU Part Units | Combined | | Square Feet |
|-----------------------------------|--------------|---------------------|---------------------|----------|-------|----------------|
| | | | | Units | | |
| | | | | Part | Whole | |
| A. GENERAL PURPOSE CLASSROOMS | | | | | | |
| 1. Type I | 500 | 12 | 10 | | 22 | 11,000 |
| 2. Type II | 800 | 9 | 4 | | 13 | 10,400 |
| 3. Type III | 1600 | 2 | | | 2 | 3,200 |
| 4. Type IV | 2200 | | 2 | | 2 | <u>4,400</u> |
| CATEGORY A TOTAL ----- | | | | | | 29,000 |
| B. SPECIAL INSTRUCTIONAL SPACE | | | | | | |
| 5. Gen. Chemistry | 1600 | .8 | .8 | 1.6 | 2 | 3200 |
| 6. Chemistry(other) | 1600 | .5 | .4 | .9 | 1 | 1600 |
| 7. Elem. Physics | 1300 | .4 | .7 | 1.1 | 2 | 2600 |
| 8. Physics(other) | 1100 | | .3 | .3 | 1 | 1100 |
| 9. General Biology | 1200 | .5 | .8 | 1.3 | 2 | 2400 |
| 10. Biology(other) | 1000 | | .5 | .5 | 1 | 1000 |
| 11. Geology-Geog. | 300 | 1.0 | | 1.0 | 1 | 300 |
| 12. Psychology and Animal Lab. | 1400 | 1.4 | | 1.4 | 2 | 2800 |
| 13. Electrical | 1200 | | 1.4 | 1.4 | 2 | 2400 |
| 14. Indus. Technology | 1200 | | .5 | .5 | 1 | 1200 |
| 15. Elem. Drafting | 1100 | | 4.8 | 4.8 | 5 | 5500 |
| 16. Adv. Drafting | 1400 | | 2.0 | 2.0 | 2 | 2800 |

TABLE 5 (CONTINUED)

| Space Category | Unit Area | IU Part Units | PU Part Units | Combined | | Square Feet |
|--|--------------|---------------------|---------------------|----------|-------|----------------|
| | | | | Units | | |
| | | | | Part | Whole | |
| 17. Cloth. & Textiles | 1000 | | .2 | .2 | 1 | 1000 |
| 18. Food & Nutrition | 1200 | | .2 | .2 | 1 | 1200 |
| 19. Accounting | 1200 | 2.3 | | 2.3 | 3 | 3600 |
| 20. Modern Lang. | 1200 | 1.0 | .6 | 1.6 | 2 | 2400 |
| 21. Music & Theater | 1000 | 1.0 | | 1.0 | 1 | 1000 |
| 22. Art, Design, Crafts, and Audio-Visual | 1000 | 2.0 | | 2.0 | 2 | 2000 |
| 23. Radio & TV | 1000 | 1.0 | 1.0 | 2.0 | 2 | 2000 |
| 24. Speech | 1200 | 1.0 | | 1.0 | 1 | 1200 |
| 25. Computing Lab. | 300 | 1.0 | | 1.0 | 1 | 300 |
| 26. Reading | 1200 | | 1.0 | 1.0 | 1 | <u>1200</u> |
| CATEGORY B TOTAL ----- | | | | | | 42,800 |

A P P E N D I X C

PURDUE UNIVERSITY

BASE ESTIMATES

FOR

DAYTIME AND EVENING

1965 and 1972

NOTE: Under "No. Units" heading, whole numbers indicate number of rooms required if the institution were to have its own facility; decimals indicate portions of time actually in use and form the basis of combined requirements developed in Tables 2-5.

TABLE 6

A 12

PU DAYTIME AND EVENING REQUIREMENTS 1965

| Space Category | Unit Area | 8:00-5:00 | | 5:00-10:00 | |
|--------------------------------|-----------|-----------|--------|------------|--------|
| | | No.Units | Sq.Ft. | No.Units | Sq.Ft. |
| A. GENERAL PURPOSE CLASSROOMS | | | | | |
| 1. Type I | 500 | 7 | 3500 | 7 | 3500 |
| 2. Type II | 800 | 3 | 2400 | 3 | 2400 |
| 4. Type IV | 2200 | 1 | 2200 | 1 | 2200 |
| CATEGORY A TOTALS ----- | | | 8100 | | 8100 |
| B. SPECIAL INSTRUCTIONAL SPACE | | | | | |
| 5. Gen. Chemistry | 1600 | 2(1.9) | 3200 | 1(.6) | 1600 |
| 6. Chemistry(other) | 1600 | 1(.3) | 1600 | 1(.2) | 1600 |
| 7. Elem. Physics | 1300 | 2(1.3) | 2600 | 1(.5) | 1300 |
| 8. Physics(other) | 1100 | 1(.4) | 1100 | 1(.1) | 1100 |
| 9. Gen. Biology | 1200 | 1(.7) | 1200 | 1(.4) | 1200 |
| 10. Biology(other) | 1000 | 1(.6) | 1000 | 1(.3) | 1000 |
| 13. Electrical | 1200 | 1(.8) | 1200 | 1(1.0) | 1200 |
| 14. Indus.Technology | 1200 | 1(.1) | 1200 | 1(.6) | 1200 |
| 15. Elem. Drafting | 1100 | 5(4.1) | 5500 | 4(4.0) | 4400 |
| 16. Advanced Drafting | 1400 | 1(.3) | 1400 | 2(1.6) | 2800 |
| 20. Modern Lang. | 1200 | 1(.4) | 1200 | 1(.6) | 1200 |
| 23. Radio & TV | 1000 | 1(.5) | 1000 | 1(.5) | 1000 |
| 26. Reading | 1200 | 1(.4) | 1200 | 1(.5) | 1200 |
| CATEGORY B TOTALS ----- | | | 23,400 | | 20,800 |

TABLE 6 (CONTINUED)

| <u>Space Category</u> | <u>Sq. Ft.</u> |
|--|----------------|
| C. GENERAL INSTITUTIONAL SPACE | |
| 27. Instructor's Offices 40 @ 75 ----- | 3000 |
| 28. Administrative Area ----- | 3800 |
| 29. Student Activities ----- | <u>1200</u> |
| CATEGORY C TOTALS ----- | 8000 |

TABLE 7

PU DAYTIME AND EVENING REQUIREMENTS 1972

| Space Category | Unit Area | 8:00-5:00 | | 5:00-10:00 | |
|--------------------------------|-----------|-----------|-------------|------------|-------------|
| | | No.Units | Sq.Ft. | No.Units | Sq.Ft. |
| A. GENERAL PURPOSE CLASSROOMS | | | | | |
| 1. Type I | 500 | 10 | 5000 | 10 | 5000 |
| 2. Type II | 800 | 4 | 3200 | 4 | 3200 |
| 4. Type IV | 2200 | 2 | <u>4400</u> | 2 | <u>4400</u> |
| CATEGORY A TOTALS ----- | | | 12,600 | | 12,600 |
| B. SPECIAL INSTRUCTIONAL SPACE | | | | | |
| 5. Gen. Chemistry | 1600 | 3(2.7) | 4800 | 1(.8) | 1600 |
| 6. Chemistry(other) | 1600 | 1(.6) | 1600 | 1(.4) | 1600 |
| 7. Elem. Physics | 1300 | 3(2.3) | 3900 | 1(.7) | 1300 |
| 8. Physics(other) | 1100 | 1(.8) | 1100 | 1(.3) | 1100 |
| 9. Gen. Biology | 1200 | 1(1.0) | 1200 | 1(.8) | 1200 |
| 10. Biology(other) | 1000 | 1(.8) | 1000 | 1(.5) | 1000 |
| 13. Electrical | 1200 | 1(1.0) | 1200 | 2(1.4) | 2400 |
| 14. Indus.Technology | 1200 | 1(.1) | 1200 | 1(.5) | 1200 |
| 15. Elem. Drafting | 1100 | 6(5.5) | 6600 | 5(4.8) | 5500 |
| 16. Advanced Drafting | 1400 | 1(.4) | 1400 | 2(2.0) | 2800 |
| 17. Cloth.& Textiles | 1000 | 1(.5) | 1000 | 1(.2) | 1000 |
| 18. Food & Nutrition | 1200 | 1(.4) | 1200 | 1(.2) | 1200 |
| 20. Modern Lang. | 1200 | 1(.7) | 1200 | 1(.6) | 1200 |
| 23. Radio & TV | 1000 | 1(1.0) | 1000 | 1(1.0) | 1000 |
| 26. Reading | 1200 | 1(1.0) | <u>1200</u> | 1(1.0) | <u>1200</u> |
| CATEGORY B TOTALS ----- | | | 29,600 | | 25,300 |

TABLE 7 (CONTINUED)

A 15

| Space Category | Sq. Ft. |
|---------------------------------------|---------|
| C. GENERAL INSTITUTIONAL SPACE | |
| 27. Instructors Offices 65 @ 75 ----- | 4875 |
| 28. Administrative Area ----- | 4000 |
| 29. Student Activities ----- | 1400 |
| CATEGORY C TOTALS ----- | 10,275 |

A P P E N D I X D

INDIANA UNIVERSITY

BASE ESTIMATES

FOR

DAYTIME AND EVENING

1965 and 1972

NOTE: Under "No. Units" heading, whole numbers indicate number of rooms required if the institution were to have its own facility; decimals indicate portions of time actually in use and form the basis of combined requirements developed in Tables 2-5.

TABLE 8

A 17

IU DAYTIME AND EVENING REQUIREMENTS 1965

| Space Catetory | Unit Area | 8:00-5:00 | | 5:00-10:00 | |
|---|--------------|-----------|-------------|------------|-------------|
| | | No.Units | Sq.Ft. | No.Units | Sq.Ft. |
| A. GENERAL PURPOSE CLASSROOMS | | | | | |
| 1. Type I | 500 | 4 | 2000 | 10 | 5000 |
| 2. Type II | 800 | 3 | 2400 | 7 | 5600 |
| 3. Type III | 1600 | 1 | <u>1600</u> | 1 | <u>1600</u> |
| CATEGORY A TOTALS ----- | | | 6000 | | 12200 |
| B. SPECIAL INSTRUCTIONAL SPACE | | | | | |
| 5. Gen. Chemistry | 1600 | 1(.5) | 1600 | 1(.5) | 1600 |
| 6. Chemistry(other) | 1600 | 1(.3) | 1600 | 1(.4) | 1600 |
| 7. Elem. Physics | 1300 | 1(.3) | 1300 | 1(.3) | 1300 |
| 9. General Biology | 1200 | 1(.3) | 1200 | 1(.3) | 1200 |
| 11. Geology-Geog. | 300 | 1(1.0) | 300 | 1(1.0) | 300 |
| 12. Psychology and Animal Lab. | 1400 | 1(.8) | 1400 | 1(1.0) | 1400 |
| 19. Accounting | 1200 | 1(.4) | 1200 | 2(1.8) | 2400 |
| 20. Modern Lang. | 1200 | 1(1.0) | 1200 | 1(1.0) | 1200 |
| 21. Music & Theater | 1000 | 1(1.0) | 1000 | 1(1.0) | 1000 |
| 22. Art, Design, Crafts Audio-Visual | 1000 | 1(1.0) | 1000 | 1(1.0) | 1000 |
| 23. Radio and TV | 1000 | 1(.5) | 1000 | 1(.5) | 1000 |
| 24. Speech | 1200 | 1(1.0) | 1200 | 1(1.0) | 1200 |
| 25. Computing Lab. | 300 | 1(1.0) | <u>300</u> | 1(1.0) | <u>300</u> |
| CATEGORY B TOTALS ----- | | | 14,300 | | 15,500 |

TABLE 8 (CONTINUED)

| <u>Space Category</u> | <u>Sq. Ft.</u> |
|--|----------------|
| C. GENERAL INSTITUTIONAL SPACE | |
| 27. Instructor's Offices 20 @ 75 ----- | 1500 |
| 28. Administrative Area ----- | 3000 |
| 29. Student Activities ----- | <u>1200</u> |
| CATEGORY C TOTALS ----- | 5700 |

TABLE 9

IU DAYTIME AND EVENING REQUIREMENTS 1972

| Space Category | Unit Area | 8:00-5:00 | | 5:00-10:00 | |
|---|--------------|-----------|--------|------------|--------|
| | | No.Units | Sq.Ft. | No.Units | Sq.Ft. |
| A. GENERAL PURPOSE CLASSROOM | | | | | |
| 1. Type I | 500 | 5 | 2500 | 12 | 6000 |
| 2. Type II | 800 | 4 | 3200 | 9 | 7200 |
| 3. Type III | 1600 | 1 | 1600 | 2 | 3200 |
| CATEGORY A TOTALS ----- | | | 7300 | | 16,400 |
| B. SPECIAL INSTRUCTIONAL SPACE | | | | | |
| 5. Gen. Chemistry | 1600 | 1(.7) | 1600 | 1(.8) | 1600 |
| 6. Chemistry(other) | 1600 | 1(.5) | 1600 | 1(.5) | 1600 |
| 7. Elem. Physics | 1300 | 1(.4) | 1300 | 1(.4) | 1300 |
| 9. Gen. Biology | 1200 | 1(.8) | 1200 | 1(.5) | 1200 |
| 11. Geology-Geog. | 300 | 1(1.0) | 300 | 1(1.0) | 300 |
| 12. Psychology and Animal Lab. | 1400 | 1(.9) | 1400 | 2(1.4) | 2800 |
| 19. Accounting | 1200 | 1(.8) | 1200 | 3(2.3) | 3600 |
| 20. Modern Lang. | 1200 | 1(1.0) | 1200 | 1(1.0) | 1200 |
| 21. Music & Theater | 1000 | 1(1.0) | 1000 | 1(1.0) | 1000 |
| 22. Art, Design, Crafts Audio-Visual | 1000 | 2(2.0) | 2000 | 2(2.0) | 2000 |
| 23. Radio & TV | 1000 | 1(1.0) | 1000 | 1(1.0) | 1000 |
| 24. Speech | 1200 | 1(1.0) | 1200 | 1(1.0) | 1200 |
| 25. Computing Lab. | 300 | 1(1.0) | 300 | 1(1.0) | 300 |
| CATEGORY B TOTALS ----- | | | 15,300 | | 19,100 |

TABLE 9 (CONTINUED)

| Space Category | Sq. Ft. |
|--|-------------|
| C. GENERAL INSTITUTIONAL SPACE | |
| 27. Instructor's Offices 35 @ 75 ----- | 2625 |
| 28. Administrative Area ----- | 3000 |
| 29. Student Activities ----- | <u>1200</u> |
| CATEGORY C TOTALS ----- | 6825 |

A 21

A P P E N D I X E

JOINT FACILITY ESTIMATES

BY THE COMMITTEE

FOR

1965 and 1972

TABLE 10

JOINT FACILITY REQUIREMENTS FOR 1965 AND 1972

| Space Category | Square Feet | |
|---|--------------|--------------|
| | 1965 | 1972 |
| D. JOINT FACILITY SPACE | | |
| 30. Library | 14,000 | 20,000 |
| 31. Student Lounge | 6,000 | 10,000 |
| 32. Food Facility | 6,500 | 6,500 |
| 33. Faculty Lounge | 1,800 | 1,800 |
| 34. Bookstore | 2,500 | 2,500 |
| 35. Building Service | 2,400 | 2,400 |
| 36. Bulk Instructional Material Storage | <u>2,400</u> | <u>2,400</u> |
| CATEGORY D TOTALS ----- | 35,600 | 45,600 |

NOTE: These estimates have been made by members of the committee as a total group.

A P P E N D I X F

SUPPORTING MATERIAL

FOR

INDIANA UNIVERSITY

AND

PURDUE UNIVERSITY

PROGRAMS

A P P E N D I X E - PART 1

PROCEDURES AND ASSUMPTIONS USED BY PURDUE REPRESENTATIVES IN DEVELOPING PURDUE PROGRAM SPACE REQUIREMENTS

Previous Studies

Future Purdue program space requirements at Fort Wayne have been under consideration more or less continuously since 1955. Early in 1955 Mrs. Betty Suddarth, under the direction of the Registrar of the University, made a statistical study of potential Purdue students from the Fort Wayne area based on recorded annual births. During the school year 1955-56 President Hovde appointed a committee headed by Professor J. W. Hicks to make a formal study of future facilities requirements at Fort Wayne. This committee presented its report in May, 1956.

The Hicks Committee activity involved two main projects:

1. Using the Suddarth data and other related material generated from the general University enrollment studies carried on by the Registrar during the previous year, it developed enrollment projections for the Fort Wayne Center. In summary, it forecast a full-time freshman and sophomore student body at Fort Wayne of 297 by 1958; 670 by 1965; and 1565 by 1972. Major assumptions made in arriving at these figures were (a) that one-half the potential freshman and sophomore students from the area would be attending the Center in 1958 and 1965 and (b) that virtually all would be attending the Center by 1972.
2. For these projected enrollments, space requirements were defined using a procedure which possibly merits a brief description. First, for each of the projection figures above a distribution was made by curriculum groupings, assuming that in the larger enrollments the same proportions would exist as in the current smaller enrollments, e.g., that there would be the same proportion of engineering freshmen in 1958, 1965 and 1972 as there were in 1955. Double entry spread sheets were then prepared which showed all of the courses required in the programs for each of these curriculum and year groups, with the room-hour requirements of each. It was then possible to enter and cumulate total student-hour needs for each type of room unit. From this point, using specific assumptions as to

room and student station utilization, calculations were made of the number of each type of classroom and laboratory needed.

Current Studies

The present committee, appointed early in the 1959-60 school year, in arriving at a final definition of Purdue program needs at Fort Wayne, first made an attempt to verify the accuracy of the interim 1958 prediction made by the earlier committee. The actual enrollment figures at the Fort Wayne Center for the years 1955, 1956, 1957 and 1958 are given on the summary table which follows (Column 16). Also shown here are data from the earlier studies (Column 7, 8, 11, 12 and 13). It will be noted that where the Hicks Committee forecast a 1958 enrollment of 287 (Column 13), in that year there were actually 302 students enrolled (Column 16), and that the 1958 Fort Wayne enrollment was 53 per cent of the estimated potential students from the Fort Wayne area as compared with the 50 per cent assumed in the Hicks Committee study.

It was clearly recognized, however, that this somewhat remarkable short-term forecasting accuracy might well be accidental and that the longer-term forecasts might be subject to much greater error. Too, it seemed to the Committee, particularly in view of current enrollment trends on the main campus, that possibly the assumption that by 1972 almost all the freshman and sophomore area students would be attending the Center might be too high. As a result, compromise projections for 1965 and for 1972 were finally agreed to as reasonable by a larger representative campus group. (See starred note at the bottom of the table). This agreement involved three items:

1. The Suddarth predictions of potential Purdue freshman and sophomore students from the Fort Wayne area were reduced 10 per cent both for 1965 and for 1972 (Column 9). (This approximates the difference between estimated and actual enrollments on the main campus in 1959-1960.)
2. The estimated number of potential Purdue students who would attend the Fort Wayne Center by 1965 was raised from 50 to 60 per cent (Column 10).
3. The estimated number of potential Purdue students who would attend the Fort Wayne Center by 1972 was reduced from 100 to 75 per cent (Column 10).

PURDUE UNIVERSITY

Freshman, and Sophomore Enrollment Projections for Ft. Wayne Center

| YEAR (1) | Lafayette Campus | | | | From Ft. Wayne Area | | | Attend Ft. Wayne Center | | | | Actual | | Rev. Pred. (17) | | |
|-------------|------------------|--------------|--------------|----------------------|----------------------|--------------|-------------|-------------------------|-----------|-------------------|--------------|---------------|--------------|-----------------------|-------------|-------------|
| | Predicted | | Total (4) | Act. Total (5) | % of Pred. (6) | Pred. (7) | Act. (8) | Pred. (9) | % (10) | Hick's Prediction | | Dipl. (14) | Deg. (15) | | | |
| | Fresh. (2) | Soph. (3) | | | | | | | | Dipl. (11) | Deg. (12) | | | | | |
| | | | | | | | | | | | | | | | All (13) | All (16) |
| | | | | | | | | | | | | | | | | |
| 1955 | | | | | | | | | | | | | | | | |
| 56 | 3263 | 2667 | 5930 | 6280 | 106 | | 413 | | 46 | | | 36 | 154 | 190 | | |
| 57 | 3243 | 2933 | 6176 | 5992 | 97 | | 460 | | 45 | | | 34 | 174 | 208 | | |
| 58 | 3497 | 2907 | 6404 | 6400 | 100 | 572 | 505 | | 47 | | | 55 | 179 | 234 | | |
| 59 | 3798 | 3151 | 6949 | 6306 | 91 | | 573 | | 53 | 50 | 247 | 118 | 184 | 302 | | |
| 1960 | 4358 | 3423 | 7781 | | | | | | | | | 76 | 182 | 258 | | |
| 61 | 4503 | 3953 | 8456 | | | | | | | | | | | | | |
| 62 | 4389 | 4100 | 8489 | | | | | | | | | | | | | |
| 63 | 4295 | 3998 | 8293 | | | | | | | | | | | | | |
| 64 | 5470 | 3916 | 9386 | | | | | | | | | | | | | |
| 1965 | 6284 | 4987 | 11271 | | | 1143 | | 1027* | 60* | 175 | 495 | | | 616* | | |
| 66 | 6135 | 5741 | 11876 | | | | | | | | | | | | | |
| 67 | 6355 | 5624 | 11979 | | | | | | | | | | | | | |
| 68 | 6400 | 5841 | 12241 | | | | | | | | | | | | | |
| 69 | 7081 | 5879 | 12960 | | | | | | | | | | | | | |
| 1970 | 7444 | 6507 | 13951 | | | | | | | | | | | | | |
| 71 | 7651 | 6859 | 14510 | | | | | | | | | | | | | |
| 72 | 8059 | 7050 | 15109 | | | 1527 | | 1374* | 75* | 250 | 1315 | 1565 | | 1031* | | |
| UEA: 2/1/60 | | | | | | | | | | | | | | | | |

NOTES -

- Col. 2, 3, 4: Suddarth and Parkhurst, Potential Enrollment for Purdue University 1955 to 1972. (1956) Table 23, p. 31.
- Col. 7: Suddarth, Potential Students for Purdue from Ft. Wayne Area 1958, 1965, 1972. (Undated) -Variable percentage.
- Col. 8: Computed from Registrar's data.
- Col. 9: Entries in this column are Col. 7 figures discounted by ten percent.
- Col. 10: Historical figures (1955-58) are Col. 16 as a percentage of Col. 8. The 1965 and 1972 entries are predictions.
- Col. 11, 12, 13: Hicks, Future of Ft. Wayne Center. (May 1956)
- *The starred entries in Columns 9, 10, and 17 for 1965 and 1972 are estimates jointly arrived at on 1/26/60 by Mallett, Hicks, Freehafer, Parkhurst, Lawshe, and Scott.

On this basis the 1965 and 1972 projected enrollments were reduced to 616 and 1031 respectively.

Using these revised enrollment figures as a base, space requirements were then calculated using the general procedures developed by the Hicks Committee but with minor modifications suggested by experience gained in working through the Indianapolis Center project. The results are summarized in Tables 6 and 7 of this report.

Because the end product of a study of this kind depends so largely upon the assumptions which are made in developing it, it would seem desirable to identify at least the major assumptions upon which it is based. These follow:

1. That facilities, will be provided to accommodate two years of University work only, in both the four-year degree and in the Applied Technology programs, with allowance for classroom space required for off-campus graduate work.
2. That curriculum offerings will continue essentially as they are at the present time, except that by 1972 it probably will be feasible to offer two years of Home Economics as compared with the one year offered presently.
3. That the proportion of freshman and sophomores in the total Center enrollment will by 1972 approach the proportions found on the first two years on the main campus.
4. That in the University Centers it is justifiable to ask only for facilities required to house the day-time student body (44 hours per week), and that these facilities then will be used to capacity during evening hours to provide both credit and non-credit work, largely for part-time students. This may possibly limit somewhat the development of evening programs.
5. That space will be provided assuming a student-station-room utilization at the 60 per cent level. This means that the number of classrooms and laboratories indicated in Tables 6 and 7 will be adequate for the projected enrollments assuming that 80 per cent of available student hours (44 hours per week) will be scheduled with an average of 75 per cent of the student stations used. Although this is a much higher utilization factor than is possible on most University campuses, we feel that it is reasonably possible to attain in the University Centers.

A P P E N D I X F - PART 2

BASIC ASSUMPTIONS IN DEVELOPMENT OF INDIANA UNIVERSITY SPACE NEEDS

The following indicates the basis used by the Indiana University group in determining estimated space requirements to conduct the educational program of Indiana University in Fort Wayne for the years 1965 and 1972.

To develop significant values for space one had to know the projected enrollment for 1965 and 1972. Officials of the high schools which provide the majority of our credit students were entirely cooperative. Based on population only, the data indicates a 1965 credit enrollment 1.75 times the average of that for 1958-59 and 1959-60; the 1972 credit enrollment is expected to be 1.3 times that for 1965. The enrollment values for 1965 and 1972 were each increased by 5 per cent in an attempt to compensate for (1) the increasing percentage of people expected to pursue higher education, (2) the effect upon local enrollment because of a new facility and (3) the fact that credit enrollment only and not an Adult Education program is being considered in this report.

Total hours of instruction per week for 1965 and 1972 were estimated. (Over a span of the last 3-4 years the average load for a credit student was 6.2 hours.) The number of sections for these periods was next estimated. Speech, composition and laboratory sections were assumed to maintain their present limited enrollments, but it was assumed that most other classes were likely to increase in size.

Individual classroom usage was estimated to be 80 per cent of the available hours during the peak load (evening hours), with 80 per cent of the stations being utilized. (With 80 per cent of the stations occupied, we can accommodate an increase in the size of class sections if necessary.) Available day-time hours were assumed to be 8:00 AM-noon and 1:00-5:00 PM, Monday through Friday (40 hours); evening hours were assumed to be 5:45-10:15PM, Monday through Friday (22.5 hours). One other factor has an important bearing on space needs: The distribution of sections prior to and after 5:30 PM. Currently 22 per cent of our classes

are scheduled prior to 5:30 PM. Continuation of this practice would require more rooms during the peak evening period. Moreover, many of those rooms would be vacant during day-time hours. Thus it seems logical to plan 30% of the program in the day-time for 1965 and 40% for 1972. Increasing the day-time program would require more full-time staff, for part-time staff is rarely available during the day-time hours.